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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/783,779	02/14/2001	Srinivas Chennupaty	42390P10924	3051

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EXAMINER

KIM, KENNETH S

ART UNIT	PAPER NUMBER
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2111

DATE MAILED: 12/19/2003

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/783,779

Applicant(s)

CHENNUPATY ET AL.

Examiner

Kenneth S KIM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

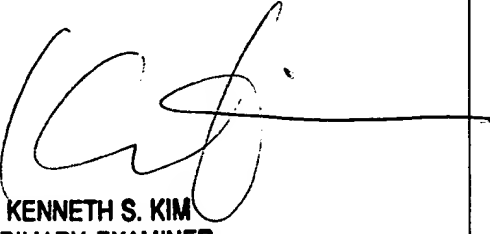
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.


KENNETH S. KIM
PRIMARY EXAMINER

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,3 6) ☐ Other: _____

1. Claims 1-30 are presented for examination.
2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 26 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Sidwell, U.S. Patent No. 5,822,619.

Sidwell teaches the invention as claimed in claims 26 and 27 including a processor implemented method comprising:

(a) decoding a single instruction (col. 9, line 51) specifying a source operand of 128 bits (col. 8, line 43), a destination operand of 128 bits, and a control word of eight bits (can be any number of bits in the instruction),

(b) responsive to the single instruction and the control word, shuffling 16-bit data element from the source operand to the destination operand (fig. 9; col. 8, line 1), wherein the source operand and the destination operand are the same operand (well known).

4. Claims 26 and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Huff et al, U.S. Patent No. 6,288,723 (and Abdallah et al, U.S. Patent No. 6,115,812, cited by the applicant and contains a similar specification).

The applied reference has a common *assignee and inventor* with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Huff et al teaches the invention as claimed in claims 26 and 27 including a processor implemented method comprising:

(a) decoding a single instruction (col. 6, line 44) specifying a source operand of 128 bits (col. 5, line 11), a destination operand of 128 bits, and a control word of eight bits (see Roussel et al, U.S. Patent No. 6,041,404, submitted by the applicant at col. 5, line 53),
(b) responsive to the single instruction and the control word, shuffling 16-bit data element from the source operand to the destination operand (fig. 3E), wherein the source operand and the destination operand are the same operand (well known).

5. Claims 17-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Hansen, U.S. Patent No. 5,819,117.

Hansen teaches the invention as claimed in claims 17-19 including a method for packed data elements comprising:

(a) decoding a single instruction specifying, a source operand, a destination operand, and a field of control bits (col. 3, line 56),

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(b) responsive to the single instruction and the field of control bits, generating a first portion of the destination operand comprised of the data elements from the same portion of the source operand (fig. 3B),

(c) where the portion is either the upper half or the lower half (bytes zero to three) of the source and destination operands, which can be the same operand.

The processor claims 20 and 21 are equivalently rejected based on the same reason.

6. Claims 1-16 and 23-25 are rejected under 35 U.S.C. 102(b) as being anticipated by Hansen, U.S. Patent No. 5,819,117.

Hansen teaches the invention as claimed in claims 1-5 including a computer system (figs. 3B and 10C) comprising:

(a) a processor ((50),

(b) a storage device coupled to the processor (40) and having stored therein an instruction, when executed by the processor, causes the processor to at least,

(c) access a packed data operand (71) having at least two portion of data elements (bytes 0-3 and 4-7),

(d) select a set of data elements from a portion of the packed data operand, the portion including at least two data elements (b(0) to b(3)),

(e) copy each data element of the selected set of data elements to specified data fields located in the corresponding portion of the destination operand (74),

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(f) wherein the packed data operand includes eight data elements (b(0) to b(7)) and the processor selects a set of data elements from either the upper half or the lower half (b(0) to b(3)),

(g) wherein a packing device packs integer data to the data elements of 16-bits to 128 bit operand and the same destination operand (all well known).

The method claims 6-10, the image data processing method claims 11-16 (with well known three dimensional transformation data processing), and the program product claims 23-25 are equivalently rejected based on the same reason.

7. Claims 1-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Abdallah, U.S. Patent No. 6,192,467.

The applied reference has a common *assignee* with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Abdallah teaches the invention as claimed in claim 28-30 including a processor comprising :

(a) a decoder to decode a first instruction specifying a first source operand of 128 bits, a first destination operand of 128 bits, and a first control word of eight bits (col. 6, lines 60-67), a second instruction, and a third instruction,

(b) an execution unit responsive to the first instruction (col. 6, line 59) to shuffle 16-bit data elements from the source operand to the destination operand (shuffle operation well known; see Sidwell), responsive to the second instruction (col. 7, lines 10-15) to shuffle data elements from the upper half of a second source operand to the upper half of a

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second destination operand, and responsive to the third instruction (col. 8, line 65 – col. 9, line 1) to shuffle data elements from the lower half of a third source operand to the lower half of a third destination operand,

(c) wherein the source and destination operand are the same operand or the processor is comprised of hardware and software components (well known).

The system claims 1-5, the method claims 6-10, the image processing method claims 11-16, the method claims 17-19, the processor claims 20-22, the program product claims 23-25, and the method claims 26 and 27 are equivalently rejected based on the same reason.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dulong taught a method of selective writing of packed data elements.

Turkowski taught a method of reordering bytes in data stream.

Nakatani taught a method of rearranging vector data elements.

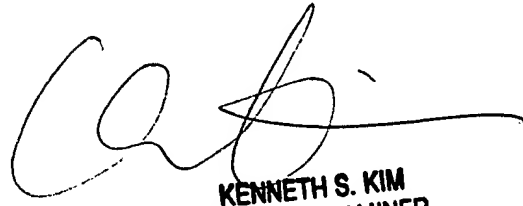
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth S KIM whose telephone number is (703) 305-9693. The examiner can normally be reached on M-F (8:30-17:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on (703) 305-4815. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

December 12, 2003



KENNETH S. KIM
PRIMARY EXAMINER